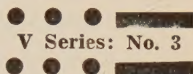


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BETTER WHEAT FOR OKLAHOMA

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*Good Wheat Makes Good Flour.**Good Flour Makes Good Bread.**Good Bread Makes a Market for Good Wheat.*

OKLAHOMA AGRICULTURAL EXPERIMENT STATION

Oklahoma A. and M. College, Stillwater

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The Oklahoma Farm Wheat Improvement Program

Purpose

Oklahoma's Farm Wheat Improvement Program* was the result of the realization among millers and grainmen that something should be done to improve the quality of wheat being produced in the state. Wheat is a very important crop in Oklahoma, constituting about 25 percent of the state's cropped acreage annually. Since nearly 80 percent of the crop is used in the baking industry, it is essential that the quality of the grain be as high as possible. A considerable part of the flour produced moves out to markets which demand the best. In order to insure future demand for Oklahoma wheat, steps must be taken to improve the grain which reaches flour mills. The aim of the Oklahoma Farm Wheat Improvement Program is to get more acres of high quality seed planted, to reduce mixed wheat, rye, and smut, and to eliminate varieties whose quality does not measure up to bakers' standards for bread-making purposes.

* The Oklahoma Millers Association, the Enid Board of Trade, Union Equity Co-Operative Exchange at Enid, and the Oklahoma Bankers Association contribute funds to carry out this program, which is a part of the Agronomy Department of the Oklahoma Agricultural Experiment Station. The Extension Service of the Oklahoma A. and M. College, and the Oklahoma Crop Improvement Association, co-operate in carrying out the program.

Method

The Canadian Crop Testing Plan was adopted as a means of testing farmers' samples and pure varieties. County agents, grainmen, and farmers collect wheat samples in their respective territories. These samples as well as pure varieties from Stillwater are planted in the county where they were collected. At the time the wheat matures, a field day is held at which the farmers' varieties are identified and classified as to purity into "A," "B," and "C" groups. Rye mixtures, smut, barley, and oats in the samples are pointed out. The various characteristics of the different varieties are discussed and approved seed sources made available to farmers.

An important part of the program has been the milling and baking contests held in connection with various fairs in the State. At these fairs, wheat is judged 25 percent on its general appearance and 75 percent on its ability to produce good bread. Displays of bread from the various varieties are also made.

Results

Varietal Quality

Definite progress has been made in improving the crop of wheat which eventually reaches the market, as evidenced by the increase in number of pure samples graded at the wheat testing plots. Farmers are becoming variety conscious, and they are aware of the fact that the elevator is not the final destination of their crop. Seed growers are receiving greater demands for quality grain, and an increased number of inquiries have been received at Stillwater regarding this or that variety.

Various data compiled from the wheat testing plots for a number of varieties are summarized in the following table:

**Average Yield, Test Weight Per Bushel, and Percent Protein
for Important Wheat Varieties.**

	Tenmarq	Turkey	Blackhull	Cheyenne	Chiefkan	Early Blackhull
Yield:*						
1939	22.4	17.9	21.2	20.6	23.0	24.0
1940	21.0	19.9	20.3	18.8	20.9	17.7
1941	15.1	11.0	11.0	13.6	13.9	13.8
Average	19.5	16.3	17.5	17.7	19.3	18.5
Test Wt. per bu. 1941	52.0	51.5	53.7	53.7	57.0	55.8
Percent protein 1941**	15.52	14.47	15.02	14.94	16.30	14.51

* These averages are based upon 20 to 23 pure samples of each variety grown at different locations in the State.

** The protein percentages are somewhat higher than the average of farm samples, because the varieties were grown only on fallowed, well-prepared land which was better than the average for the particular region.

From a yield standpoint, there is no significant difference between the varieties Tenmarq and Chiefkan or Early Blackhull for the three years indicated. Chiefkan, based on only 1941 results, averaged highest in test weight per bushel and in percent protein. But these figures do not tell the whole story. In the milling and baking contests, 54 samples have been tested: 19 Tenmarq, 10 Turkey, 11 Blackhull, and 14 Chiefkan. The average results were 95, 90.6, 87.8, and 79.9 percent respectively for these varieties. These data added to that accumulated in other states definitely shows the inferior quality of Chiefkan as a bread wheat.

Mixed Wheat, Rye, and Smut

Mixed wheat, rye, and smut are all factors which enter into the determination of the final commercial grade of a car of wheat. In 1937, Oklahoma produced 3,171 cars of wheat which graded mixed, 586 cars were degraded because of rye, and 349 cars because of smut. The following table shows what has been done since that time to reduce the losses farmers sustain in marketing a poor quality product:

**Cars of Wheat Degraded Because of
Mixtures, Rye, and Smut.***

	1937	1938	1939	1940	1941
Mixed Wheat	3,171	1,877	2,155	958	222
Rye	586	242	461	837	324
Smut	349	86	138	39	6

* Appreciation is given to H. N. Holmes, Federal Supervisor, Grain Grading Division, U. S. D. A., at Enid, for the figures from which these results were obtained.

Continued Effort Is Needed

Considerable progress has been made, but there is still need for farmers, grain dealers, and millers to put forth efforts necessary to bring about the improvement which must be made if Oklahoma is to continue to compete with other sections in the production of quality wheat. Several mills have spent considerable money and time obtaining good seed wheat at a minimum of expense for farmers in their respective territories. These mills now enjoy an excellent demand for their flour. It takes high quality wheat to produce good bread, and only by concerted efforts on the part of all concerned can we maintain Oklahoma's reputation as a producer of these products.

Information about sources of good seed wheat can be obtained from county agents, or by writing: Oklahoma Crop Improvement Association, Oklahoma A. and M. College, Stillwater, Oklahoma.

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DIRECTOR

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